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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/654,165	09/01/2000	Itsuto Nakanishi	043931/0114	6017

7590

12/03/2002

Alan I Cantor
Foley & Lardner
Washington Harbour
3000 K Street NW Suite 500
Washington, DC 20007-5109

EXAMINER

LUK, EMMANUEL S

ART UNIT

PAPER NUMBER

1722

6

DATE MAILED: 12/03/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/654,165

Applicant(s)

NAKANISHI, ITSUTO

Examiner

Emmanuel S. Luk

Art Unit

1722

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 September 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-35, 39 and 40 is/are allowed.
- 6) ☒ Claim(s) 36 and 37 is/are rejected.
- 7) ☒ Claim(s) 38 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 36 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Osuna-Diaz (5,078,589) in view of Gellert et al (4,917,594).

Osuna-Diaz teaches an injection molding machine having an array (Fig. 1) of injection nozzles (22) that have valve pins (28) that are linked by a linkage element (34), the linkage element ensures that the valve pins are moved simultaneously by the actuators (56) that flank the nozzles (Fig. 1). The valve pins in the nozzles move to open and close the gate (30) of the nozzles. A distribution manifold (18) supplies material to the nozzles. The linking element moves in the same direction as the valve pins (Fig. 2).

Osuna-Diaz fails to teach an actuator located beneath the manifold.

Gellert teaches an injection nozzle (10) with a central bore (16) and movable valve pin (66) within the bore, the pin having a tip end (80) and driven portion (64), the nozzle having a manifold (42) and an actuating assembly comprising a linkage element (62) and a plurality of actuators (74), the linking element moves in the same direction as the valve pin. The actuators are located between the tip end of the nozzle and the linkage element and are flanking the nozzle (Fig. 1).

The placement of the actuator underneath the manifold can be easily modified by one skilled in the art as shown by Gellert. In this case, the actuators (74) are clearly shown to be beneath the manifold and in Osuna-Diaz this can be accomplished by merely extending the actuators further down so that it is located under the position of the manifold while the actuators can still operate the linking element by merely extending the length of the piston rod (58).

It would have been obvious to one of ordinary skill in the art to modify Osuna-Diaz with placing the actuators beneath the manifold as taught by Gellert because it is merely a shift in location of the actuator while the operation of the apparatus remains the same.

Allowable Subject Matter

4. Claim 38 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. Claims 1-35, 39 and 40 are allowed.

6. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record fails to teach or suggest a first and second array of injection nozzles, each nozzle having a melt channel and valve pin movable within the channel, a melt distribution manifold between the first and second arrays and in fluid communication with the arrays, a first and second actuating assembly, each actuating assembly comprising at least one actuator and a common linkage element driven by the actuator and linked to all of the valve pins in the respective array of injection nozzles to move the valve pins in unison. The closest prior art Gellert ('258 and '971), Osuna-Diaz, Reitan and Belous all teach an array of injection nozzles having a linkage element that actuates the nozzles. They do not teach a second array of nozzles with the manifold located between the first and second arrays. Gellert (4,212,626) teaches a stack molding system having two injection nozzles that have a manifold plate (65) between. Gellert fails to teach a linkage element to two arrays of injection nozzles and that both arrays communicate with the manifold. Gellert and Diaz fails to teach an actuator located in between the injection nozzles for actuating the linking element.

Response to Arguments

7. Applicant's arguments with respect to claims 36 and 37 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emmanuel S. Luk whose telephone number is (703) 305-1558. The examiner can normally be reached on Monday through Friday 8 to 4.

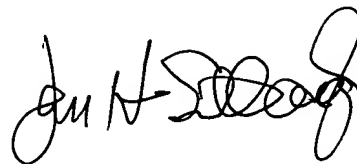
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jan S. Silbaugh can be reached on (703) 308-3829. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Art Unit: 1722

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0651.

E.L.

November 27, 2002



JAN H. SILBAUGH
SUPERVISORY PATENT EXAMINER
ART UNIT ~~1722~~ 1722

12/02/02